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Humor at work: validation of the short work-related Humor Styles Questionnaire (swHSQ)

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Abstract: As part of daily interactions humor is an integral element of work relationships with consequences for well-being or turnover intentions. However, its adequate assessment in the work context has yet to be improved. While the Humor Styles Questionnaire (HSQ; Martin et al. 2003. Individual differences in uses of humor and their relation to psychological well-being: Development of the Humor Styles Questionnaire. *Journal of Research in Personality* 37. 48–75) covers adaptive and maladaptive functions of humor styles, it assesses humor in general life. With the adaption of the HSQ, that is, the short (12-item) and work-related version of the HSQ (swHSQ), we provide an efficient tool for the assessment of individual humor styles in the work context. We validated and tested the swHSQ in two Austrian-German and one U.S. sample and analyzed its structure and impact by means of confirmatory factor analyses as well as regression analyses. The swHSQ seems valid and reliable (α between 0.62 and 0.86) in a German and an English version, thus representing an efficient self-report tool for field research. Evidence for construct validity is provided with regard to humor styles' associations with optimism, occupational self-efficacy, irritation, and job satisfaction. While the positive (affiliative, self-enhancing) humor styles showed expected relationships with the outcomes, patterns of relationships of the negative styles suggest intercultural differences in workplace humor. Thus, self-defeating but not aggressive humor seems impactful in the Austrian-German sample, while the contrary was found in the U.S. sample.

Keywords: humor styles, scales validation, job satisfaction, irritation, cross-cultural

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1 Introduction

The many consequences of humor in everyday intrapsychic and interpersonal processes concern private as well as work life. Humor affects well-being (Guenter et al. 2013; Martin et al. 2003), and plays an important role in leadership (e. g. Tang 2008), negotiations (e. g. Vuorela 2005), and instruction (e. g. Field 2009). As part of daily communication, humor or the ability to amuse oneself (Martin 2007; Simpson and Weiner 1989) is integral in work relationships.

Already Kahn (1989) suggested the use of humor for organizational diagnosis and change – the latter being a constant endeavour of most organizations nowadays. Conceptual papers address the influence of humor on leadership, communication, organizational culture, staff persuasion and motivation (Romero and Cruthirds 2006; Wood et al. 2011), as well as team climate (Robert and Wilbanks 2012). Recent empirical evidence supports the importance of humor (styles) at work for stress, satisfaction with co-workers, team cooperation, organizational commitment, job satisfaction (Cann et al. 2014; Romero and Arendt 2011), and leader-follower relationships (Pundt and Herrmann 2015; Robert et al. 2016; Wisse and Rietzschel 2014). The diverse functions of humor in organizations (e. g. coping, reframing, communicating, expressing hostility, constructing identities) could make its conscious use an effective human resource tool (Kahn 1989) at several organizational levels (individual, team, organizational and environment; Dikkers et al. 2012). Also, the use of humor seems to differ between private and work contexts: While generally self-defeating humor has lower frequencies as compared to aggressive humor (e. g. Leist and Müller 2012), in the work context the order is often reversed (e. g. Robert et al. 2016). Thus, the relevance for scrutinizing humor in the workplace is undeniable, and the positive and negative humor styles with their different functions seem ideal for such an undertaking. However, the adequate way to measure humor in the workplace has yet to be further developed.

The Questionnaire of Occupational Humorous Coping (QOHC, Doosje et al. 2010) is one of the few scales to focus on workplace humor. However, humor may be used for more purposes than coping (e. g. to enhance social interactions). Although the Humor Styles Questionnaire (HSQ, Martin et al. 2003) includes functional and dysfunctional characteristics of humor, it assesses humor styles in general across life domains and not specifically in the work context. Furthermore, the HSQ is comparatively long (32 items) for use in field research. The Humor Climate Questionnaire (HCQ), recently introduced by Cann et al. (2014), covers employees' perceptions of the role of humor in the workplace with four factors and is based in part on the HSQ. Whereas the HSQ has a clear focus on a person's own use of humor, the HCQ shifts between perceptions of

coworkers' and supervisors' use of humor and a person's own humor as a group member. The positive factor of the HCQ confounds the two distinct factors of the HSQ (affiliative, self-enhancing), and the negative factor represents aggressive humor while not adopting the self-defeating style of the HSQ. The factor of outgroup humor operationalizes only management as outgroup, whereas the fourth factor (i. e., supervisor support) is reverse coded and actually represents supervisors' nonapproval of humor in the workplace. Thus, its measurement still lacks an adequate approach. It seems worthwhile to lean on the HSQ for the assessment of humor at work as it seems to provide a solid basis and has often been used in the work context (Mesmer-Magnus et al. 2012).

1.1 Humor Styles Questionnaire

Definitions of humor are manifold, depending on whether humor is seen as a communicative activity (e. g. Martineau 1972) with positive emotional reactions by perceivers (e. g. Romero and Cruthirds 2006) or as a trait-like cheerfulness (Ruch et al. 1996). In addition, humor is seen as a multidimensional construct, including the abilities to produce, recognize, appreciate, and use humor as a coping strategy (e. g. Thorson and Powell 1993). Accordingly, measures for (usually self-assessed) humor range from more trait-focused (e. g. State-Trait-Cheerfulness-Inventory/STCI, Ruch et al. 1996) and internal perspectives (e. g. Sense of Humor Questionnaire/SHQ, Svebak 2010) to different humor styles (HSQ, Martin et al. 2003) and humor for coping in work contexts (QOHC, Doosje et al. 2010).

Popular questionnaires cover only the positive connotations of humor such as cheerfulness or sense of humor (e. g. STCI, SHQ, QOHC), whereas the HSQ (Martin et al. 2003) distinguishes two positive from two negative styles of the use of humor. These humor styles denote specific ways in which people use humor in their lives (Martin et al. 2003) for enhancing their selves (i. e., self-enhancing style), improving relationships with others (i. e., affiliative style), enhancing themselves at the expense of others (i. e., aggressive style), and enhancing their relationships with others at their own expense (i. e., self-defeating style). The HSQ covers these four styles with eight-item subscales in a general way.

The HSQ demonstrated reliability and validity: in the original study by Martin et al. (2003), Cronbach alphas for the subscales ranged from 0.77 to 0.81. Test-retest reliability one week later ranged between 0.80 and 0.85 ($p < 0.001$). Intercorrelations between subscales were low, but both positive styles and both negative styles correlated slightly higher. While the positive styles showed consistent and distinct zero-order correlations with several well-being indicators

(e. g. self-esteem, optimism) and (negatively so) with depression and anxiety scales, the negative, self-defeating style showed the opposite pattern. The aggressive style was unrelated to well-being, anxiety, depression etc., but positively related to hostility and aggression. Leist and Müller (2012) found comparable reliabilities and validity of the complete 32-item German version of the HSQ.

1.1.1 Humor styles

Humor alters cognitive appraisal processes (Kuiper et al. 1993) like positive reframing (see Lefcourt and Thomas 1998), is linked to greater perceptions of control over life events, and to lower levels of stress (e. g. Cann et al. 2000; Cann et al. 2010; Kuiper et al. 1993). Thus, coping humor was found to buffer the effects of traumatic stressors on burnout and posttraumatic stress disorder in firefighters (Sliter et al. 2014). *Self-enhancing* humor helps people attain distance from problems in stressful situations (Martin et al. 2003) and acts as a coping strategy and emotion regulator. *Affiliative* humor describes a person's tendency to facilitate relationships by telling jokes and engaging in funny banter (Lefcourt 2001, cf. Martin et al. 2003). Accordingly, both styles are positively associated with resilience, social competence, interpersonal adaptation, work engagement, and emotional well-being (Guenter et al. 2013; Martin et al. 2003; Veselka et al. 2010; Yip and Martin 2006), thus providing an adaptive function in work contexts. *Aggressive* humor stands for irony, sarcasm, teasing, and mockery as well as sexist and racist humor. As such, it is associated with manipulating or belittling others (Janes and Olsen 2000). People who tell funny anecdotes or do funny things at their own expense in order to gain the appreciation of others use *self-defeating* humor (Martin et al. 2003). These styles are maladaptive in the workplace, as humor at one's own or others' expense jeopardizes social relationships and self-worth. Both negative styles are positively related to emotional exhaustion (Guenter et al. 2013) and negatively related to resilience and social competence (Yip and Martin 2006).

All four humor styles can occur at work, and they have unique and sometimes ambiguous effects. In a recent meta-analysis, the positive humor styles were found to be positively related to work-related performance, health, coping effectivity, and job satisfaction and negatively related to burnout and stress (Mesmer-Magnus et al. 2012). The meta-analysis did not include negative styles. In general, aggressive and self-defeating humor showed associations with hostility, aggression, subclinical psychopathy, and Machiavellianism whereas self-defeating humor solely showed associations with depression, anxiety, and low self-esteem (Martin et al. 2003; Veselka et al. 2010). Recent studies in work

contexts found negative relations between aggressive humor and satisfaction with co-workers, team cooperation, and organizational commitment and a positive relation between aggressive humor and stress (Romero and Arendt 2011). In the latter study, self-defeating humor was unrelated to outcomes. Cann et al. (2014) reported that (undifferentiated) negative humor was negatively correlated with job satisfaction and organizational commitment. Followers' own aggressive humor style was negatively (and their affiliative style was positively) related to LMX with their supervisor (Pundt and Herrmann 2015; Wisse and Rietzschel 2014), whereas the self-defeating style was positively related to LMX when there was congruence between the leader and follower (Wisse and Rietzschel 2014). Given these findings, the negative humor styles need to be included in work-related humor research. We propose that all four humor styles of the short work-related adaptation of the HSQ will be distinct but not independent factors.

1.2 Validation of the short work-related Humor Styles Questionnaire (swHSQ)

The aim of our three quantitative cross-sectional studies was to provide an efficient tool for the assessment of adaptive and maladaptive individual humor styles in the workplace. We assume that these humor styles differ between individuals, are stable within individuals but are differently applied according to the setting. Thus, we aim (a) to validate short (i. e., 12-item) work-related German and English versions of the HSQ (Martin et al. 2003) that would be efficient and reliable in field research and (b) to provide evidence of the construct and criterion validity of both versions by analyzing their associations with optimism, occupational self-efficacy, cognitive and affective irritation, and job satisfaction. The advantage of this work-related version over the general HSQ is that it is more efficient, the most important/ appropriate items for the work context are selected, and reversed items are avoided. These shorter subscales also fulfill a criterion of diary studies which commonly use less than five items (Ohly et al. 2010).

In order to provide evidence for the validity of the swHSQ, we chose outcomes that either allowed for a comparison between the HSQ and our swHSQ or resembled often-applied outcomes. Thus, *optimism* was chosen for the first study. Work-related outcomes that were similar to the constructs tested by Martin et al. (2003) were included in the second and third studies. Therefore, we chose *occupational self-efficacy*, as it is close to (general) self-esteem; *irritation*, as it is a preclinical indicator of depressive mood and overlaps with depression; and *job satisfaction*, as it is one of the most often applied measures in organizational psychology (e. g. Judge et al. 2001). Whereas a significant

relationship of the humor styles with optimism and occupational self-efficacy will serve as an indicator of construct validity, the relationship of the humor styles with irritation and job satisfaction indicates criterion validity. According to our arguments, the work-related positive styles were expected to be positively associated with optimism, occupational self-efficacy and job satisfaction, and negatively associated with irritation. For the work-related negative humor styles, the opposite pattern was expected.

Optimistic people "expect things to go their way, and generally believe that good rather than bad things will happen to them" (Scheier and Carver 1985: 219). Optimism is related to well-being (Scheier et al. 1994), which is supposed to be mainly due to stability in the ability to cope with life challenges. In line with arousal theory, (a sense of) humor is related to an enhanced ability to enjoy positive life experiences (Martin et al. 1993), and self-enhancing humor is associated with a humorous perspective even in the face of stress (Martin et al. 2003). The self-enhancing style was consistently found to be positively related to optimism, whereas the affiliative style was not (Cann et al. 2010; Martin et al. 2003). Martin et al. (2003) did not find relations between the negative styles and optimism, whereas Cann et al. (2010) report a negative relationship between self-defeating as well as aggressive humor and optimism. However, the use of humor in the workplace may differ from its use in everyday life, for example, as colleagues are not as emotionally close as friends or relatives, and hence humor may be applied differently in interpersonal interactions in the workplace. Also, optimists tend to show more adaptive coping (e. g. the use of humor, Scheier et al. 1994), which speaks for more affiliative and less self-defeating humor as compared with less optimistic people. Finally, people with aggressive humor are more likely to be hostile, aggressive and sarcastic (Martin et al. 2003), implying that they expect bad rather than good things to happen to them.

Occupational self-efficacy "refers to the competence that a person feels concerning the ability to successfully fulfil the tasks involved in his or her job" (Rigotti et al. 2008: 240) and is positively related to job satisfaction. Given that the positive humor styles are affirming of the self (i. e., affiliative) and self-regulatory (i. e., self-enhancing), they should be positively related to self-efficacy. The positive styles were positively, and self-defeating humor was negatively related to self-esteem (Martin et al. 2003). As self-efficacy and self-esteem are highly correlated (Hirschy and Morris 2002), analogous patterns with occupational self-efficacy can be assumed. People who use aggressive humor disregard the feelings of the targets of their humor as they are concerned with feeling superior; also, they are more likely to be neurotic (e. g. Martin et al. 2003). Thus, perceptions of self-efficacy should be negatively related to aggressive humor.

Irritation (Mohr et al. 2006) is a state of mental impairment expressed by rumination (i. e., cognitive) and irritability (i. e., affective) that is positively related to depressive symptoms (Dormann and Zapf 2002). In addition, social stressors affect depressive symptoms mainly via irritation (Dormann and Zapf 2002). As sense of humor has a moderating effect on the relations between critical life events and mental well-being (Martin and Lefcourt 1983), humor styles should be related to irritation as well. Self-enhancing humor was found to be related to beneficial cognitive appraisals in stressful situations (Martin et al. 1993; Martin et al. 2003) or in building close relationships that provide support in stressful situations (e. g. affiliative, Romero and Arendt 2011). The positive humor styles were related to burnout, stress, depression, health, and affective well-being (Jovanovich 2011; Martin et al. 2003; Mesmer-Magnus et al. 2012). As self-defeating humor is defined as being overly self-disparaging and as costly to oneself, and aggressive humor is costly for one's relationships with others, the negative styles may not be helpful for coping but may rather foster stress. Martin et al. (2003) found a positive relation between self-defeating humor and depression, and the aggressive style was positively related to stress at work (Romero and Arendt 2011). Both negative styles were negatively related to affective well-being (Jovanovich 2011).

Job satisfaction has a prominent research history, not least of all because of its remarkable relation to job performance (Judge et al. 2001). Humor is associated with a positive self-concept, positive cognitive appraisal, and positive affect in response to life events (Martin et al. 1993). Whereas the positive styles enhance the self and one's relationships with others, the negative styles jeopardize a person's own self-worth and relationships with others by emphasizing antagonistic relationships with, for instance, coworkers or supervisors. Thus, sense of humor, positive climate of humor, self-enhancing and affiliative humor were positively related to job satisfaction (Cann et al. 2014; Mesmer-Magnus et al. 2012). A negative climate of humor was negatively related to job satisfaction, and an aggressive humor style was negatively related to satisfaction with coworkers (Cann et al. 2014; Romero and Arendt 2011).

According to our aim of providing an efficient tool for the assessment of humor styles in the workplace, in our first study, the HSQ items were adapted to the work context and applied in a sample of German and Austrian students. The subsequent two studies with professionals in Germany and Austria (Study 2) and with a native English-speaking (U.S.) sample (Study 3) were conducted to demonstrate the short scale's reliability and validity. Our hypotheses are:

Hypotheses 1/2 (*H1/2*): Affiliative and self-enhancing humor styles will be significantly positively related and the self-defeating and aggressive humor styles will be significantly negatively related to optimism (*H1*) and to occupational self-efficacy (*H2*).

H3: Both positive humor styles will be significantly negatively associated and both negative humor styles will be significantly positively associated with cognitive and affective irritation.

H4: Affiliative and self-enhancing humor styles will be significantly positively associated and the self-defeating and aggressive humor styles will be significantly negatively associated with job satisfaction.

2 Study 1

2.1 Method

The aim of Study 1 was to adapt the HSQ items to a work-related environment in order to select items for the short scale.

2.1.1 Sample

We conducted a study with 264 German and Austrian Master-level students, the majority of whom worked in addition to studying. Participants had a mean age of $M = 25.51$ years ($SD = 4.25$) and 184 (70 %) were women (Table 1). The majority ($n = 169$, 64 %) answered the questions with respect to their job, 95 (36 %) answered with regard to their studies.

Table 1: Descriptive statistics and correlations in the student sample (Study 1).

	M (SD)	1	2	3	4	5	6
1. Age	25.51 (4.25)						
2. H self-enhancing	3.35 (0.80)	0.03	(0.75)				
3. H affiliative	3.98 (0.64)	0.00	0.37**	(0.70)			
4. H aggressive	1.93 (0.72)	−0.04	0.05	0.14*	(0.58)		
5. H self-defeating	2.27 (0.79)	0.02	0.27**	0.22**	0.31**	(0.66)	
6. Optimism	3.77 (0.78)	0.09	0.33**	0.24**	−0.11	−0.06	(0.82)

Note: $N = 264$. Pearson correlations, two-sided. Reliabilities (Cronbach's α) are on the diagonal in parentheses. H = short form of the work-related Humor Styles.
*$p \leq 0.05$. **$p \leq 0.01$.

2.1.2 Measures

Humor styles were measured with the 32 HSQ items (Martin et al. 2003) that were adapted to the work context. The expression *at work* was added where

appropriate, and the terms family, friends, and so forth were replaced by *my colleagues*. For sample items see Table 3 (right column). Participants were asked to indicate the degree to which the statements applied to them on a 5-point Likert scale ranging from 1 = *not at all* to 5 = *completely*. While the original HSQ uses a 7-point scale, we chose a simpler response scale according to the common practice in work and organizational psychology research – the area the swHSQ is meant for. For example, important scales for job characteristics use 5-point Likert scales (e. g. Instrument for stress-related job analysis, Semmer et al. 1999, Work Design Questionnaire, Morgeson and Humphrey 2006). Additionally, 5-point and 7-point scales have been found to be comparable (e. g. Dawes 2008).

Optimism was assessed with the three items from the Revised Life Orientation Test (LOT-R, Scheier et al. 1994) that were not negatively worded. A sample item is "I'm always optimistic about my future." The ratings were obtained with a Likert-scale format asking the degree to which the statements applied to them ranging from 1 = *does not apply at all* to 5 = *applies completely*. The reliability of the scale was $\alpha = 0.82$.

Several ***control variables*** were included in order to rule out alternative explanations. Age was included as a continuous variable. Sex was included as a dichotomous variable (1 = *female*, 2 = *male*). Students had to indicate whether they were answering the questions with regard to a job or to their studies (1 = *job*, 2 = *studies*).

2.1.3 Analyses

The humor scales were analyzed using a principal factor analysis (PFA) with a Varimax rotation, and item and scale analyses were conducted. Construct validity was analyzed using stepwise regression. Step 1 (not displayed) includes control variables and step 2 adds the humor styles.

2.1.4 Procedure

Paper-pencil questionnaires in German were distributed at the beginning of several work and organizational psychology classes in a large University over the course of 1 week. Completed questionnaires were immediately collected by lecturers. Participation was voluntary. Students were instructed to answer the questions with regard to the job they were doing in addition to studying.

2.2 Results

2.2.1 Scale development

PFA with the work-related HSQ items were used as a basis for item selection. The criteria for including items on the desired short scale were a clear factor loading (i. e., ≥ 0.50) with no substantial cross-loadings (i. e., ≤ 0.30) on other factors, reliability concerns, as well as a consideration of the appropriateness for the work context and the specific item content. That is, items covering slightly different aspects of the respective style were given preference over items covering precisely the same aspect as another included item. Also, negatively coded items were usually excluded due to their potential impairment of the psychometric properties of the scale (e. g. Dalal and Carter 2014). Furthermore, positively and negatively worded items do not measure the same construct (Dalal and Carter 2014).

The initial solution showed nine factors with Eigenvalues greater than 1.0, but the screeplot and the percentage of explained variance (below 5 %) for five factors suggested a four-factor solution. In a subsequent forced four-factor solution all items loaded highest on their intended factor (i. e., humor style), and only four of the 32 items had substantial cross-loadings. Whereas none of the selected items had substantial cross-loadings, only the three final items of the self-defeating humor style subscale had the highest loadings. None of the three were negatively worded. The three items selected for the self-enhancing subscale were the two items with the highest loadings and the item with the fourth-highest loading because the item with the third-highest loading was excluded due to negative wording. The three items selected for the affiliative subscale were mainly based on item-content considerations; thus, for the three chosen items, out of the two higher loading items, one was negatively worded, and the third item was not amongst the highest loading items overall. The two items with the highest loadings (one negatively worded) were selected for the aggressive humor subscale. Due to reliability issues, two additional items were included. Thus, according to the criteria described above, 13 items were chosen to be included in Study 2. However, in order to facilitate a comparison to and an understanding of Study 2, the analyses presented in the following section refer to the 12 final items.

The reliabilities ranged from $\alpha = 0.58$ for the aggressive subscale to $\alpha = 0.75$ for self-enhancing humor (Table 1).

Women had significantly lower ratings of the other-directed humor styles than men (affiliative: $M = 3.92$, $SD = 0.66$ vs. $M = 4.11$, $SD = 0.59$, $t/260 = 2.160$, $p < 0.05$;

aggressive: $M = 1.81$, $SD = 0.65$ vs. $M = 2.25$, $SD = 0.78$, $t/260 = 4.702$, $p < 0.01$). Students with jobs had significantly lower ratings of the negative humor styles than those without jobs (self-defeating: $M = 2.18$, $SD = 0.77$ vs. $M = 2.43$, $SD = 0.79$, $t/262 = -2.464$, $p < 0.05$; aggressive: $M = 1.84$, $SD = 0.68$ vs. $M = 2.10$, $SD = 0.77$, $t/262 = -2.847$, $p < 0.01$).

2.2.2 Construct validity

Optimism. The results of regression analyses (Table 2) mainly supported Hypothesis 1 as both positive humor styles were positively related to optimism (affiliative: $\beta = 0.17$, $p < 0.01$; self-enhancing: $\beta = 0.32$, $p < 0.001$), and self-defeating humor was negatively related to optimism ($\beta = -0.16$, $p < 0.05$). Contrary to our hypothesis, aggressive humor was not significantly associated with optimism. The humor styles explained 17 % of the variance in optimism over and above the control variables.

3 Study 2

3.1 Method

Study 2 was conducted to validate and test the selected items from Study 1. Additionally, we present test-retest reliabilities.

3.1.1 Sample

The study was conducted with German and Austrian knowledge workers. Tax accountants and other professional employees (e. g. accounting clerks) were eligible to participate. The final sample consisted of 392 professionals with complete answers to the humor styles questions. Data from 307 Austrian (78 %) and 84 (21 %) German professionals were included; one professional did not indicate his/her home country. Participants were on average 42.23 ($SD = 11.32$) years old and 190 were women (53 %; Table 5). More than half (52 %) of the participants ($n = 201$) were the owners of the tax accounting offices. From a second wave of measurement 1 year later, we were able to match responses for 94 respondents for testing test-retest reliability.

Table 2: Regression analyses in which humor styles predicted outcomes (Three studies).

	Study 1[a]	Study 2[b]				Study 3[c]			
	Optimism	Occupational self-efficacy	Cognitive irritation	Affective irritation	Job satisfaction	Occupational self-efficacy	Cognitive irritation	Affective irritation	Job satisfaction
Age	0.07	0.29***	−0.04	0.00	0.02	0.05	−0.04	−0.06	−0.02
Tenure		−0.19*	−0.00	0.06	−0.04	0.05	0.02	0.04	0.15*
Sex	0.05	0.08	−0.02	−0.03	0.08	0.00	−0.11	−0.07	0.02
Job	−0.01								
Country		0.01	0.11*	0.10*	−0.10				
Owner/ leader		0.17*	0.08	0.02	0.17*	−0.05	0.03	0.09	−0.17**
Work hours						0.10	−0.02	−0.11	0.06
H self-enhancing	0.32***	0.12*	−0.11	−0.12*	0.12	0.26***	−0.12	−0.19**	0.24***
H affiliative	0.17**	0.21***	−0.08	−0.18**	0.05	0.31***	−0.15	−0.06	0.04
H aggressive	−0.10	0.07	−0.01	0.06	−0.00	−0.18**	0.16*	0.28***	−0.09
H self-defeating	−0.16*	−0.35***	0.20**	0.28***	−0.16*	0.02	0.04	0.01	−0.01
R^2	0.179	0.183	0.060	0.109	0.070	0.304	0.073	0.128	0.153
ΔR^2	0.166	0.105	0.036	0.084	0.027	0.239	0.061	0.096	0.063
F	7.883***	8.871***	2.544**	4.833***	2.869**	13.372***	2.242*	4.493***	5.482***

Note: Standardized regression coefficients (β). H = short form of the work-related Humor Styles.

[a]Control variables (CV) Study 1: age, sex, job/study (1 = *job*, 2 = *studies*). Step 1 CV: $R^2 = 0.013$ (optimism). [b]Study 2: age, tenure, sex, country, owner of chancellery (1 vs. 0 = *not*). Step 1 CV: $R^2 = 0.078$ (occupational self-efficacy), $R^2 = 0.024/0.025$ (cognitive/affective irritation), $R^2 = 0.043$ (job satisfaction). [c]Study 3: age, tenure, sex, leadership position (1 vs. 0 = *not*), work hours. Step 1 CV: $R^2 = 0.065$ (occupational self-efficacy), $R^2 = 0.012/0.032$ (cognitive/affective irritation), $R^2 = 0.090$ (job satisfaction).

*$p \leq 0.05$. **$p \leq 0.01$. ***$p \leq 0.001$.

3.1.2 Measures

The 12 ***humor styles*** items as displayed in Table 3 (second column) as well as the fourth item for the aggressive humor style ("Sometimes I think of something that is so funny that I can't stop myself from saying it, even if it is not appropriate for the work situation," adapted from the original scale's Item 19, Martin et al. 2003) were included. A PFA indicated the exclusion of this fourth

Table 3: Items from the short work-related HSQ (swHSQ) and factor loadings (Study 2 and 3).

Work-related items	Factor loadings[b]	
	Study 2	Study 3
Affiliative humor		
1. I don´t have to work very hard at making my colleagues laugh – I seem to be a naturally humorous person. [5][a]	**0.83**	**0.78**
5. I enjoy making my colleagues laugh. [21]	**0.82**	**0.74**
9.I can usually think of witty things to say when I´m with my colleagues. [29R][c]	**0.77**	**0.88**
% Variance (Factor 1)	35.52	19.45
Self-Enhancing humor		
2. If I am feeling depressed at work, I can usually cheer myself up with humor. [2]	**0.68**	**0.77**
6. If I am feeling upset or unhappy at work, I usually try to think of something funny about the situation to make myself feel better. [10]	**0.80**	**0.79**
10. If I´m at work and I´m feeling unhappy, I make an effort to think of something funny to cheer myself up. [18]	**0.74**	**0.85**
% Variance (Factor 2)	9.14	38.47
Aggressive humor		
3. If someone makes a mistake at work, I will often tease them about it. [3]	**0.79**	**0.72**
7. If I don´t like someone at work, I often use humor or teasing to put them down. [27]	**0.71**	**0.81**
11. If something is really funny to me at work, I will laugh or joke about it even if someone will be offended. [31R][c]	**0.65**	**0.74**
% Variance (Factor 3)	8.04	6.68
Self-defeating humor		
4. I will often get carried away in putting myself down if it makes my colleagues laugh. [8]	**0.74**	**0.82**
8. I often try to make my colleagues like or accept me more by saying something funny about my own weaknesses, blunders, or faults. [12]	**0.82**	**0.84**
12. Letting others laugh at me is my way of keeping my colleagues in good spirits. [32]	**0.57**	**0.74**
% Variance (Factor 4)	9.14	7.92

Note: R = Recoded; Scale anchors: 1 = *not at all* to 5 = *completely*. German language versions (Studies 1 and 2) are available from the authors.

[a]Original item number (Martin et al. 2003) in square brackets.

[b]Extraction method: Principal factor analysis. Rotation method: Varimax with Kaiser normalization. The rotation converged in six iterations. Tables of complete factor loadings for all studies are available from the authors.

[c]Not recoded, in contrast to original.

aggressive humor item (Table 3). Subscale reliabilities ranged from $\alpha = 0.62$ to $\alpha = 0.82$ (Table 5).

Occupational self-efficacy was measured with three of the six items from the short version of the respective scale by Rigotti et al. (2008); for example, "I can remain calm when facing difficulties in my job because I can rely on my abilities." Item ratings were obtained in a Likert-scale format ranging from 1 = *not at all* to 7 = *completely*. The scale reliability was $\alpha = 0.82$.

Irritation was assessed with the eight items from the Irritation Scale by Mohr et al. (2006). Five items captured affective irritation (e. g. nervousness), a sample item being "I get grumpy when others approach me." Three items covered cognitive irritation; for example, "I have difficulty relaxing after work." Participants were asked to rate each item on a Likert scale ranging from 1 = *not at all* to 7 = *completely*. The Cronbach's alphas were 0.89 for cognitive and 0.87 for affective irritation.

A single item asked for overall ***job satisfaction***, which had to be rated by means of seven faces displaying expressions from very negative to very positive feelings (Kunin 1955). Single items are commonly used, acceptable and comparable to composite measures of job satisfaction (Wanous et al. 1997).

Control variables. Age and tenure were assessed continuously. Sex (1 = *female*, 2 = *male*), country (1 = *Austria*, 2 = *Germany*), and ownership (1 = *owner*, 2 = *employee*) were measured dichotomously.

3.1.3 Analyses

Additionally to a PFA and item and scale analyses, a confirmatory factor analysis (CFA) with AMOS (Arbuckle and Wothke 1999) was conducted for the 12 items of the final scale. Validity was analyzed by stepwise regression.

3.1.4 Procedure

The Austrian Chamber for Tax Consultants provided access to those members' email addresses who consented to receiving emails from third parties. About 2,000 emails, personally addressing the tax accountants with informational text and a link to the German online questionnaire, were sent (twice). In Germany, all regional chambers of tax consultants were informed about the study via a letter and an email. In addition, the German Federation of Chambers of Tax Consultants recommended study participation to the regional chambers. Subsequently, several regional chambers published an informational text in their newsletters and/or on their webpages. The larger project included other highly relevant aspects to the tax

accountant profession (e. g. personnel recruiting/ retention). All chambers were promised to receive the study results; individual participants had the option to leave their email address for the distribution of the final results. This resulted in a return rate of about 15 % for Austria, which–according to the Austrian Chamber for Tax Consultants (oral communication, 2013)–is higher than the usual return rates for (much shorter) surveys. Due to the different survey link presentations, the return rate could not be calculated for Germany.

3.2 Results

3.2.1 Scale development

Two items from Study 1 were negatively worded (as in the original scale by Martin et al., 2003) and were reformulated for Study 2 (Items 9 and 11). Whereas the initial solution of the PFA (13 items) produced three factors with Eigenvalues greater than 1.0, the screeplot and the percentage of explained variance supported a (forced) four-factor structure (fourth factor: Eigenvalue 0.967, 7.4 % variance explanation). One of the aggressive humor items showed a severe cross-loading with the affiliative subscale and was excluded. A PFA with the 12 final items showed a total explained variance of 66 % for four factors (Table 3). The factor loadings ranged from 0.57 to 0.83. The cross-loadings for Items 2 (self-enhancing) and 12 (self-defeating) were above 0.30, but they were at least 0.20 smaller than the loadings on their intended factors. Also, excluding those items would have led to reduced reliabilities in their respective subscales; thus, both items were retained.

After imputation of (randomly) missing data (in six cases) by the expectation-maximization (EM) algorithm, we examined the discriminant validity of the four subscales by conducting a CFA with a maximum likelihood estimation (Table 4). The Chi-square coefficient revealed that the four-factor model fit the humor-style data better than the one-factor model, the two-factor model (i. e., one positive and one negative style), or the three-factor model (i. e., one positive vs. the two negative styles). These results were also corroborated by using the Chi-square value relative to its degrees of freedom, with a ratio of 2 taken as an indicator of good fit (Arbuckle and Wothke 1999). For the four-factor model, χ^2/df was 2.95. This four-factor model also showed a Tucker-Lewis Index (TLI = 0.91) and a Comparative Fit Index (CFI = 0.94) above the recommended standard of 0.90 as well as the lowest Akaike Information Criterion (AIC) of all tested models. Finally, the four-factor model showed a low Root Mean Square Error of Approximation (RMSEA = 0.071) close to the cutoff value of .06 (Hu and Bentler 1999) respectively below the cutoff value for fair fit of .08 (e. g. MacCallum et al. 2001).

Table 4: Confirmatory factor analysis: comparison of alternative factor structures for the swHSQ (Studies 2/3).

Model	χ^2	*df*	$\Delta\chi^2$	χ^2/df	TLI	CFI	AIC	RMSEA
Study 2								
One-factor	482.9	54	–	8.94	0.63	0.70	530.90	0.143
Two-factor	299.2	53	183.7	5.65	0.79	0.83	349.21	0.109
Three-factor	254.0	51	45.2	4.98	0.82	0.86	307.96	0.101
Four-factor	141.5	48	112.5	2.95	0.91	0.94	201.51	0.071
Study 3								
One-factor	691.5	56	–	12.35	0.50	0.58	735.54	0.200
Two-factor	282.9	54	408.6	5.24	0.82	0.85	330.92	0.122
Three-factor	237.5	52	45.4	4.57	0.88	0.88	289.52	0.112
Four-factor	128.3	48	109.2	2.67	0.93	0.95	188.35	0.077

Note: $N = 392/286$ (Study 2/3).
All χ^2 and $\Delta\chi^2$ values were significant at $p < 0.001$.

The reliabilities of the four subscales were acceptable, except for the aggressive subscale ($\alpha = 0.62$, Table 5). These results indicate four distinct humor-style factors and thus support our proposition. The test-retest reliability one year later was $\alpha = 0.77$ for affiliative, $\alpha = 0.67$ for self-enhancing, $\alpha = 0.63$ for self-defeating and $\alpha = 0.60$ for aggressive humor ($p < 0.001$).

Women scored significantly lower in the negative humor styles as compared to their male counterparts (aggressive: $M = 1.40$, $SD = 0.46$ vs. $M = 1.57$, $SD = 0.54$, $t/335 = -3.614$, $p < 0.01$; self-defeating: $M = 1.79$, $SD = 0.71$ vs. $M = 2.08$, $SD = 0.76$, $t/372 = -3.736$, $p < 0.001$). Owners scored significantly higher in the negative humor styles as compared to their employee counterparts (aggressive: $M = 1.54$, $SD = 0.53$ vs. $M = 1.42$, $SD = 0.47$, $t/385 = 2.300$, $p < 0.05$; self-defeating: $M = 2.02$, $SD = 0.72$ vs. $M = 1.80$, $SD = 0.74$, $t/387 = 3.089$, $p < 0.01$). Austrians scored higher in the positive humor styles as compared to their German counterparts (self-enhancing: $M = 2.84$, $SD = 0.81$ vs. $M = 2.58$, $SD = 0.86$, $t/386 = 2.723$, $p < 0.05$; affiliative: $M = 3.19$, $SD = 0.83$ vs. $M = 2.90$, $SD = 0.85$, $t/385 = 2.924$, $p < 0.01$).

3.2.2 Construct validity

Occupational self-efficacy. The results mainly supported Hypothesis 2 (Table 2, Study 2), as affiliative ($\beta = 0.21$, $p < 0.001$) and self-enhancing humor ($\beta = 0.12$, $p < 0.05$) were significantly positively related and self-defeating humor was negatively related to occupational self-efficacy ($\beta = -0.35$, $p < 0.001$). Contrary

Table 5: Descriptive statistics and correlations in the German-speaking sample (Study 2) and in the English-speaking sample (Study 3).

	M (SD)		1	2	3	4	5	6	7	8	9	10	11
	Study 2	Study 3											
1. Age	42.23 (11.32)	34.89 (11.12)		0.77**		−0.10	−0.06	0.11*	0.09	0.21**	0.03	0.09	0.08
2. Tenure	12.39 (9.57)	5.53 (4.67)	0.55**			−0.04	−0.04	0.07	0.04	0.10*	0.01	0.08	0.06
3. Work hours	–	37.38 (8.09)	−0.11	0.27**									
4. H self-enhancing	2.78 (0.80)	3.37 (0.83)	0.00	0.03	0.19**	(0.80)/ (0.71)	0.50**	0.27**	0.37**	0.08	−0.12*	−0.11*	0.11*
5. H affiliative	3.13 (0.85)	3.43 (0.92)	−0.02	0.03	0.16**	0.61**	(0.86)/ (0.82)	0.21**	0.43**	0.12*	−0.10	−0.13*	0.09
6. H aggressive	1.50 (0.52)	1.96 (0.83)	−0.13*	−0.10	0.09	0.19**	0.29**	(0.71)/ (0.62)	0.43**	0.01	0.01	0.12*	−0.00
7. H self-defeating	1.93 (0.74)	2.36 (0.93)	−0.08	0.02	0.06	0.19**	0.38**	0.57**	(0.83)/ (0.72)	−0.15**	0.10*	0.18**	−0.04
8. Occ. self-efficacy	5.41 (0.90)	5.40 (1.18)	0.11	0.14*	0.22**	0.45**	0.45**	−0.02	0.10	(0.91)/ (0.82)	−0.11**	−0.22**	0.44**
9. Irritation, cognitive	3.77 (1.54)	2.67 (1.48)	−0.05	−0.03	−0.06	−0.18**	−0.19**	0.07	0.01	−0.36**	(0.88)/ (0.89)	0.51**	−0.18**
10. Irritation, affective	2.77 (1.14)	2.57 (1.35)	−0.10	−0.06	−0.15*	−0.20**	−0.13*	0.20**	0.08	−0.44**	0.73**	(0.91)/ (0.87)	−0.28**
11. Job satisfaction	5.37 (1.12)	4.82 (1.43)	0.08	0.22**	0.18**	0.28**	0.20**	−0.01	0.05	0.45**	−0.33**	−0.36**	

Note: Study 3: in the lower-left part of the table. $N = 274–286$. Study 2: in the upper-right part of the table. $N = 351–392$. Pearson correlations, two-sided. Reliabilities (Cronbach's α) are on the diagonal in parentheses (Study 3/2). H = short form of the work-related Humor Styles.
*$p \leq 0.05$. **$p \leq 0.01$.

to our hypothesis, no significant relation between occupational self-efficacy and aggressive humor was found. The humor styles explained 11 % of the variance over and above the control variables.

3.2.3 Criterion validity

Cognitive and affective irritation. The results partially supported Hypothesis 3. Self-enhancing and affiliative humor were negatively related to affective irriation ($\beta = -0.12$, $p < 0.05$ respectively $\beta = -0.18$, $p < 0.01$), but not to cognitive irritation. As stated, self-defeating humor was positively associated with both irritation subconstructs (cognitive: $\beta = 0.20$, $p < 0.01$; affiliative: $\beta = 0.28$, $p < 0.001$), but aggressive humor showed no significant relations to irritation. The humor styles explained 4 % respectively 8 % of the variance in cognitive and affective irritation.

Job satisfaction. Hypothesis 4 was only partially supported for self-defeating humor ($\beta = -0.16$, $p < 0.05$) but not for the relations between the positive styles and aggressive humor and job satisfaction. The humor styles explained 3 % of the variance.

4 Study 3

4.1 Method

In order to validate and test the English version of the short scale, a study was conducted via the crowdsourcing service Amazons' Mechanical Turk (AMT, e. g. Mason and Suri 2012) to gather a sample from the U.S.

4.1.1 Sample

Participants were on average 34.89 ($SD = 11.12$) years old and 114 were female (40.4 %; Table 5). One third ($n = 93$) of the participants (33 %) held leadership responsibility.

4.1.2 Measures

The 12 final ***humor styles*** items from Study 2 were included in the questionnaire. The reliabilities of the four subscales were acceptable ($\alpha = 0.71$ to $\alpha = 0.86$).

Occupational self-efficacy, irritation, and ***job satisfaction*** were measured with the same scales as in Study 2 and had reliabilities between $\alpha = 0.88$ and $\alpha = 0.91$.

Control variables. Age, tenure and working hours were assessed continuously. Sex (1 = *female*, 2 = *male*) and whether the participant held 1 = a *leadership position* or 0 = *not* were captured dichotomously.

4.1.3 Analyses

Analyses were similar to Study 2.

4.1.4 Procedure

Two HITs (Human Intelligence Tasks) with 150 and 165 assignments, respectively, were created and published in AMT. The HITs led to an external webserver. Restrictions for participation were a minimum age of 18 years and a job of at least 20 hr per week. Workers were offered $1 for an estimated 25-min survey. With a final duration of 12 min and an hourly wage of $4.84 on average, the HIT was attractive. For quality control, a screening question in an open format had to be answered by participants, asking for a humorous situation they had experienced in their job (or, alternatively, an idea why they had never experienced one). From initially 318 participants, 32 were excluded due to missing data. Overall, data from 286 participants were complete and eligible for inclusion in the analyses.

4.2 Results

4.2.1 Scale development

Whereas the initial solution of the PFA produced two factors with Eigenvalues greater than 1.0, the screeplot and the percentage of explained variance supported a four-factor structure. The subsequent forced four-factor structure yielded a cumulative explained variance of 73 % as well as Eigenvalues of 0.951 and 0.801 and 7.9 % and 6.7 % variance explained by the third and fourth factors, respectively (Table 3). All items had their highest loadings on their intended factors, ranging from 0.72 to 0.88. Cross-loadings for Items 1 and 5 (affiliative) and Item 4 (self-defeating) were above 0.30, but these cross-loadings were at least 0.20 smaller than the loadings on their intended factors. Taking reliability concerns into account, these items were retained.

After imputation of (randomly) missing data (in 19 cases), we conducted a CFA (Table 4). The four-factor model fit the data best (i. e., lowest Chi-square, χ^2/df, AIC, RMSEA and highest TLI and CFI). The reliabilities were acceptable (Table 5). These results supported the proposition of four distinct humor-style factors for the English-speaking sample.

Women scored significantly lower in affiliative humor ($M = 3.21$, $SD = 0.98$ vs. $M = 3.58$, $SD = 0.86$, $t/280 = -3.308$) and in the negative humor styles (aggressive: $M = 1.58$, $SD = 0.63$ vs. $M = 2.21$, $SD = 0.85$, $t/278 = -7.094$; self-defeating: $M = 1.97$, $SD = 0.93$ vs. $M = 2.61$, $SD = 0.93$, $t/280 = -5.921$, all $p < 0.001$). Employees with leadership position scored significantly higher in all humor styles as compared to employees without leadership position (self-enhancing: $M = 3.53$, $SD = 0.84$ vs. $M = 3.29$, $SD = 0.82$, $t/284 = 2.270$, $p < 0.05$; affiliative: $M = 3.66$, $SD = 0.93$ vs. $M = 3.32$, $SD = 0.91$, $t/284 = 2.937$; aggressive: $M = 2.17$, $SD = 0.93$ vs. $M = 1.86$, $SD = 0.76$, $t/153 = 2.808$; self-defeating: $M = 2.60$, $SD = 1.00$ vs. $M = 2.24$, $SD = 0.88$, $t/284 = 3.076$, all $p < 0.01$).

4.2.2 Construct validity

Occupational self-efficacy. The results of regression analyses (Table 2) supported Hypothesis 2 in part, as both positive humor styles were significantly positively associated with occupational self-efficacy (affiliative: $\beta = 0.31$; self-enhancing: $\beta = 0.26$, $p < 0.001$), but self-defeating humor was not. A significant negative relation between aggressive humor and occupational self-efficacy was found ($\beta = -0.18$, $p < 0.01$). The humor styles explained 24 % of the variance.

4.2.3 Criterion validity

Cognitive and affective irritation. The results only partially supported Hypothesis 3. Self-enhancing humor was negatively related to affective irritation ($\beta = -0.19$, $p < 0.01$), but not to cognitive irritation. Affiliative humor was not related to irritation. Aggressive humor was negatively related to cognitive and affective irritation ($\beta = 0.16$, $p < 0.05$ respectively $\beta = 0.28$, $p < 0.001$). Self-defeating humor showed no significant relations to irritation. The humor styles explained 6 % respectively 10 % of the variance in cognitive and affective irritation.

Job satisfaction. Beside a significantly positive association between self-enhancing humor and job satisfaction ($\beta = 0.24$, $p < 0.001$), the humor styles showed no significant associations with job satisfaction. Thus, Hypothesis 4 was only partially supported. The humor styles explained 6 % of the variance.

5 Discussion

The swHSQ seems to reliably and efficiently assess four distinct but not independent humor styles that demonstrated unique relations with work-related correlates and outcomes. Only the aggressive humor subscale showed a marginally satisfactory reliability in the German-speaking samples. The results were comparable to findings for the HSQ (Martin et al. 2003). Thus, affiliative and self-enhancing humor showed higher correlations with each other than with aggressive or self-defeating humor, and the negative styles were more highly correlated with each other than with either of the positive styles. The intercorrelations were slightly higher than those found by Martin et al. (2003; $r = 0.33$ to 0.36 for positive, $r = 0.22$ to 0.23, $p < 0.001$ for negative styles).

The order of the means of the subscales in the three studies corresponded to Martin et al. (2003), with higher ratings for the positive styles compared with the negative styles. Only the order of the negative styles was reversed in all three samples, with aggressive humor showing the lowest mean. Aggressive humor may be rated lower for the work context (a) due to strong social desirability for a respectively low rating, (b) because it seems less appropriate in the work context, or (c) because its incidence is lower. The fact that students who answered the humor questions with regard to their work scored lower on aggressive humor (as well as on self-defeating humor) compared with the students who answered with regard to their studies (Study 1) speaks for a lower prevalence of negative styles in the work context. The role of aggressive humor in a private context seems to differ from its role in a work context. The ambiguous message of aggressive humor may be easier to interpret in a relationship with a well-known person, and teasing may be more acceptable.

The fact that Austrian tax accountants showed higher positive humor than German professionals (Study 2) may indicate a more "serious work culture" in Germany than in Austria. With regard to cultural values, Germany tends to score higher in pragmatism and lower in indulgence in comparison with Austria (Hofstede 2001).

Evidence for the validity of the swHSQ was provided by four outcomes. The humor styles incrementally explained between three and 24 % of the variance in the outcomes, with higher variance explanations in the English-speaking as compared with the German-speaking sample. The positive styles were positively related to optimism, occupational self-efficacy, and the self-enhancing style to affective irritation and (in the U.S. sample) to job satisfaction. Affiliative humor and (only in the German-speaking sample) self-enhancing humor were negatively related to affective irritation, while the positive styles did not relate to

cognitive irritation. Thus, the patterns slightly differed between both samples: Self-defeating humor showed positive relations with irritation in the German-speaking sample, however, it showed no significant relations with any of the outcomes in the English-speaking sample. Aggressive humor did not demonstrate substantial relations in the German-speaking sample. However, aggressive humor was significantly related to occupational self-efficacy and irritation in the English-speaking sample. These findings may be based on cultural differences in the use of humor. For example, Romero and Arendt (2011) reported similar results with aggressive but not self-defeating humor styles related to important work outcomes of American employees. Overall, these findings support their categorization as adaptive and maladaptive styles.

5.1 Strengths and limitations

A main strength of this adaptation and validation was the use of three distinct samples, each with a sufficient sample size. Validating the scale in German and English samples proved to be essential for a more in-depth understanding. The stepwise approach of first adapting all items to the work context and subsequently shortening the subscales is worth mentioning. Also, testing all four styles simultaneously in the regressions is stricter than examining bivariate correlations with outcomes like Martin et al. (2003) did. Test-retest reliability was analyzed with a time lag of 1 year, but should be retested after 1 week in order to be strictly comparable with Martin et al. (2003). Also, convergent validity (self- versus peer-ratings) remains to be tested.

The main limitations of the studies were the one-source, self-report, cross-sectional nature.

The swHSQ was intended to be validated for use as a self-report measure and to be comparable to the studies by Martin et al. (2003), thus making the use of self-reports inevitable and the cross-sectional design adequate. However, no causal inferences can be made with regard to humor styles' impact on the outcomes.

Conducting research via AMT entails a lack of environmental control. Inserting open-screening questions and replicating well-known findings from earlier paper-pencil research ensures data quality (Crump et al. 2013). For instance, our results as well as Martin and colleagues' (2003) indicate higher aggressive humor for males.

Whereas the order and interrelations of the four styles may be generalizable across professions, research on their role needs to be extended for different occupations and other work-related outcomes (e. g. performance). The swHSQ is intended to cover humor styles at work in an efficient way – though creating a short

scale of the (general) HSQ is recommendable, this was beyond our scope (e. g. sampling family/friends). However, our first study (conducted for scale reduction) could serve as a basis for this attempt, providing rationales for item selection.

5.2 Implications

Future research should test the swHSQ for equivalence across different languages in additional comparable samples. Tests of other outcomes are desirable (e. g. interpersonal outcomes). Given the diverging relevance of the negative styles in the U.S. as compared with Germany and Austria, more research in different cultures is needed in order to judge real differences in the roles that humor might play at work. Studies on general use of humor based on Hofstedes' (1980) cultural dimensions (mainly power distance, collectivism, masculinity) found Arabs (Egyptian, Lebanese) were lower on self-directed (-enhancing/ -defeating) humor than Americans (mostly Hispanics; Kalliny et al. 2006). Chinese (compared to Canadian students, Chen and Martin 2007) were lower on all four styles. Similarly, Taher et al. (2008) report that in (collectivistic) cultures with interdependent self-construal self-defeating humor is less maladaptive and the relation between humor styles and well-being are not as strong as in (individualistic) cultures with independent self-construal. Especially aggressive humor seems to differ in prevalence and meaning (Chen and Martin 2007; Taher et al. 2008).

The rating and reliability of the aggressive style in the German samples was low, suggesting a differentiation into aggressive and mildly aggressive humor (see Romero and Cruthirds 2006). Whereas aggressive humor is used to victimize or ridicule others (Janes and Olsen 2000), mildly aggressive humor comprises teasing and other soft forms of behavior-corrective attempts. Hence, both styles might differ in their functions at the workplace, and it is therefore necessary to measure both of them.

An organizational culture is created by all members of an organization and their specific humor styles. Especially supervisors and members of the management are role models for the adequate use of humor in a given organization. Thus, raising awareness for the adaptive and maladaptive functions of humor can provide a first important step towards effective use.

5.3 Conclusion

The swHSQ seems to be an efficient and reliable measurement tool for assessing humor in the workplace, though future studies need to further test it. Given the

associations of humor styles with occupational self-efficacy, irritation, and job satisfaction, accounting for positive and negative humor styles in the workplace seems highly indicated. Challenges like cross-national teamwork and global cooperation may benefit from cross-cultural research on how humor styles function at work.

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